UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Analytical results and sample locality map of stream-sediment, heavy-mineral-concentrate, water, and rock samples from the Bisti, De-Na-Zin, and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico

By

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This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature. Any use of trade names is for descriptive purposes only and does not imply endorsement by the USGS.

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CONTENTS

Page

Studies related to Wilderness 1
Introduction..... 1
Methods of study..... 1
Sample collection..... 1
Stream-sediment samples..... 3
Heavy-mineral-concentrate samples..... 3
Rock samples..... 3
Water samples..... 4
Sample preparation..... 4
Sample analysis..... 5
Spectrographic method..... 5
Uranium analysis..... 5
Method of water analysis..... 5
RASS..... 5
References cited..... 6
Explanation of abbreviations used in tables 4-8..... 10

TABLES

TABLE 1. Limits of determination for spectrographic analysis of rocks and stream sediments..... 7

TABLE 2. Chemical methods used for water analyses..... 8

TABLE 3. Limits of determination for water samples..... 9

TABLE 4. Spectrographic analyses of nonmagnetic (NM-1) fractions derived from stream-sediment samples..... 11

TABLE 5. Spectrographic analyses of magnetic (M-1) fractions derived from stream-sediment samples..... 17

TABLE 6. Spectrographic analyses of <100-mesh sieved stream-sediment fractions..... 23

TABLE 7. Spectrographic analyses of rock samples..... 29

TABLE 8. Analytical data for water samples..... 32

ILLUSTRATIONS

FIGURE 1. Index map of the Bisti, De-Na-Zin, and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico..... 2

STUDIES RELATED TO WILDERNESS

Bureau of Land Management Wilderness Study Areas

The Federal Land Policy and Management Act (Public Law 94-579, October 21, 1976) requires the U.S. Geological Survey and the U.S. Bureau of Mines to conduct mineral surveys on certain areas to determine their mineral resource potential. Results must be made available to the public and be submitted to the President and the Congress. This report presents the results of a mineral survey of the Bisti (010-057), De-Na-Zin (010-004), and Ah-Shi-Sle-Pah (010-009) Wilderness Study Areas, San Juan County, New Mexico.

INTRODUCTION

In the spring and fall of 1981, we conducted a reconnaissance geochemical survey of the Bisti, De-Na-Zin, and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico.

The Bisti, De-Na-Zin, and Ah-Shi-Sle-Pah Wilderness Study Areas comprise about 50 mi^2 (130 km^2) in the southwest corner of San Juan County, New Mexico, and lie about 30 mi (50 km) south of Farmington (see figure 1). Access to the vicinity of the study areas is provided on the east by New Mexico state highway 44, on the south by New Mexico state highway 56-57, and on the west by New Mexico state highway 371. Access between the Bisti, De-Na-Zin, and Ah-Shi-Sle-Pah Wilderness Study Areas is provided by San Juan County Rd C-15 which connects New Mexico state highway 44 at Huerfano Trading Post (abandoned) with New Mexico state highway 371 near Bisti Trading Post (also abandoned). Access within the three study areas is by jeep or foot trails.

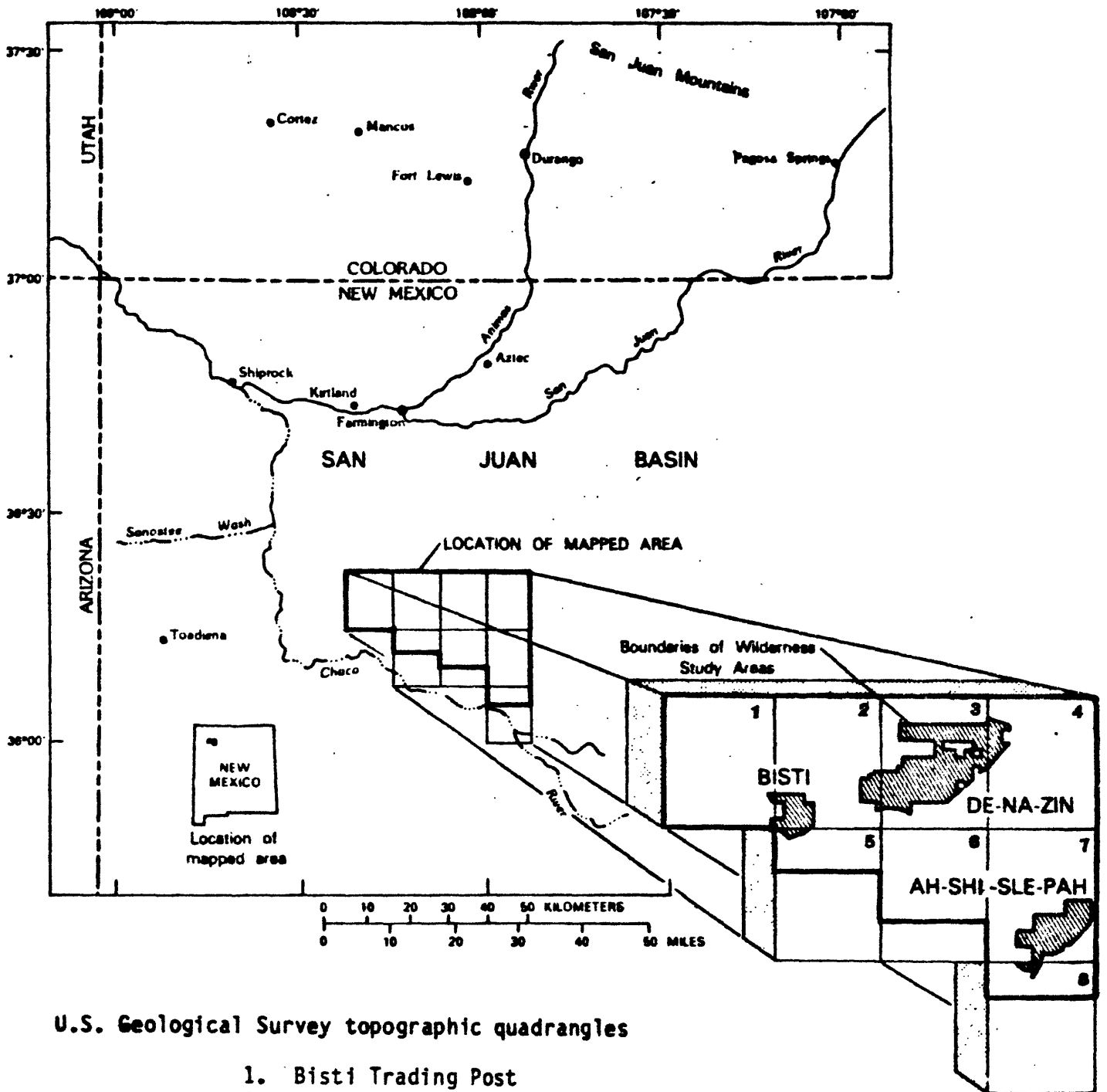
The study area occupies the southwest corner of the San Juan Basin, which is an asymmetric northwest-southeast-trending structural depression containing sedimentary rocks as thick as 14,000 ft (4,300 m) ranging in age from Cambrian to Holocene. Only Upper Cretaceous or higher rocks are exposed in the vicinity. The individual formations have been described in detail by Sears and others, 1941; Gassett and Hinds, 1971.

Elevations in Bisti, De-Na-Zin, and Ah-Shi-Sle-Pah Wilderness Study Areas range from 6,800 ft (2,070 m), above sea level in De-Na-Zin, to the north, to 5,900 ft (1,800 m) above sea level in Ah-Shi-Sle-Pah to the south, providing a topographic relief in the immediate region of nearly 900 ft (270 m). The ground surface is a gently sloping, highly dissected plateau cut by entrenched intermittent streams. Interstream uplands are blanketed by extensive fields of stabilized sand dunes.

METHODS OF STUDY

Sample Collection

We collected samples at 74 sites. At many of those sites, we collected both a stream-sediment sample and a heavy-mineral concentrate. Additionally, a few rock and water samples were collected. We analyzed 59 stream-sediment samples, 59 panned-concentrate samples, 8 rock samples, and 8 water samples, for a sampling density of about 1 sample per 1 mi^2 for the stream sediment and heavy-mineral concentrate.



U.S. Geological Survey topographic quadrangles

1. Bisti Trading Post
2. Alamo Mesa West
3. Alamo Mesa East
4. Huerfano Trading Post SW
5. Tanner Lake
6. Pretty Rock
7. Pueblo Bonito NW
8. Pueblo Bonito

Figure 1.--Index map showing location of Bisti, De-Na-Zin, and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico.

Stream-sediment samples

Analyses of the stream-sediment samples represent the chemistry of the rock material eroded from the drainage basin upstream from each sample site. Such information is useful in identifying those basins which contain concentrations of elements that may be related to mineral deposits.

The stream-sediment samples consisted of active alluvium collected primarily from first-order (unbranched) and second-order (below the junction of two first-order) streams as shown on USGS topographic maps (scale = 1:24,000).

Heavy-mineral-concentrate samples

We panned heavy-mineral-concentrate samples from the same active alluvium as the stream-sediment samples. Each bulk sediment sample was panned until most of the quartz, feldspar, organic material, and clay-sized material was removed. The sample was air dried.

Rock samples

Rock samples consisted of grab and composite chip samples of a few atypical rocks, rock types that might contain unusual metal values. These samples were mechanically crushed and pulverized to <150 mesh (<0.10 mm), then analyzed:

Sample	Description	Comment
CH018R	$NaHCO_3/Na_2CO_3$	Fracture-controlled precipitate
CH040R	Fe/Mn oxide	Float
CH045R	Barite	Float, 4 in (10-cm) diameter nodule
CH049R	Fe/Mn oxide	2- to 6-in (5- to 15-cm) bed
CH064R	Fe/Mn oxide	3- to 9-in (8- to 22-cm) bed, contains detailed plant impressions
CH068R	Fe-Mn oxide	2- 6-in (5- to 15-cm) bed
CH069R1	Coal	Partially exposed seam in arroyo wall
CH069R2	Fracture-filling	Sulfur-rich (?) coating in coal seam

Water samples

Only one well (CH050W) occurred within the boundaries of the Bisti Wilderness Study Area, none were found in the De-Na-Zin or Ah-Shi-Sle-Pah areas. The remainder of the water samples were collected close to the boundaries of the three areas. A 250-mL sample was taken at each site and stored in a new treated plastic bottle. In addition, a 60-mL sample was filtered through a 0.45-micrometer filter, acidified with Ultrex nitric acid to pH <2, and stored in an acid-rinsed polyethylene bottle. The water temperature, pH, and specific conductance were measured at each site. The pH of the water was determined by using a Markson 88 model pH meter. At three wells (CH050W, CH051W, and CH052W), an untreated sample was collected into a glass bottle having a foil-lined cap for later radon determination.

Sample	Description	Comment
CH021W	Well	Artesian, flowing, contains 1% oil
CH027W	Well	Windmill, pumping
CH042W	Well	Dug well, hand pump
CH050W	Well	Windmill, pumping
CH051W	Well	Windmill, pumping
CH052W	Well	Windmill, pumping
CH055W	Tank	Galvanized metal, fed by windmill
CH063W	Tank	Cement, fed by spring

Sample Preparation

Only the stream-sediment samples required extensive preparation. Rock samples were simply crushed and then pulverized with ceramic plates to minus 0.15 mm. Water samples required no preparation beyond that done in the process of collecting them.

We sieved the stream-sediment samples through a 14-mesh (1.2 mm) screen and the minus 14-mesh material was retained. The samples were air dried and sieved to 0.150 mm using stainless steel sieves. The portion of the sediment passing through the sieve was saved for analysis.

After panning the sediment, we sieved the samples and then we used bromoform to separate and remove the remaining quartz and feldspar from the heavy-mineral concentrate. The heavy minerals (specific gravity >2.8) were separated into three fractions using the following procedure: the most magnetic material (largely magnetite) was removed by hand magnet and discarded. The remaining material was separated into two fractions using a Frantz Isodynamic Separator at 0.1 amp and 1.0 amp (forward setting 25°, side setting 15°). The fraction magnetic at 0.1 amp (mainly residual magnetite) was discarded. The final setting at 1.0 amp yielded the two fractions to be analyzed. These two fractions were examined under the microscope, pulverized to <150 mesh (<0.10 mm) using an agate mortar and pestle, and then analyzed.

Sample Analysis

Spectrographic method

We analyzed the stream-sediment, heavy-mineral-concentrate, and rock samples for 31 elements using a semiquantitative, direct-current arc emission spectrographic method (Grimes and Marranzino, 1968). Spectrographic results were obtained by visual comparison of spectra derived from the sample against spectra obtained from standards made from pure oxides and carbonates. Standard concentrations are geometrically spaced over any given order of magnitude of concentration as follows: 100, 50, 20, 10, and so forth. Samples whose concentrations are estimated to fall between those values are assigned values of 70, 30, 15, and so forth. The precision of the analytical method is approximately plus or minus one reporting unit at the 83 percent confidence level and plus or minus two reporting units at the 96 percent confidence level (Motooka and Grimes, 1976). Values determined for the major elements (iron, magnesium, calcium, and titanium) are given in weight percent; all others are given in parts per million (micrograms/gram) (table 1).

Uranium analysis

Fluorometric analyses for uranium were performed on the <100-mesh sediment sample using slightly modified versions of procedures described by Grimaldi and others (1952) and Cantanni and others (1956). The detection limit of this method is 0.05 ppm.

Method of water analysis

Water samples were analyzed by the procedures outlined in table 2. Limits of determination and reporting units for the analytical data are listed in table 3.

ROCK ANALYSIS STORAGE SYSTEM

Upon completion of all analytical work, the analytical results were entered into a computer-based file called RASS (Rock Analysis Storage System). This RASS file contains both descriptive geological information and analytical data. Any or all of this information may be retrieved and converted to a standard form (STATPAC) for computerized statistical analysis or publication (VanTrump and Miesch, 1976).

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TABLE 1.--Limits of determination for the spectrographic analysis of rocks and stream sediments, based on a 10-mg sample

[The spectrographic limits of determination for heavy-mineral-concentrate samples are two reporting units higher than the limits given for rocks and stream sediments; 15 of the M-1 and NM-1 samples were not analyzed for Be, Sc, and Zr. **Analysts** Principal analyst for the spectrographic analyses was M. S. Erickson. Additional spectrographic support was provided by B. M. Adrian, R. Baker, B. Bailey, D. E. Detra and R. T. Hopkins. Preparation of sediment and rock samples was performed under the direction of J. E. Kilburn]

Elements	Lower determination limit	Upper determination limit
	Percent	
Iron (Fe)	0.05	20
Magnesium (Mg)	.02	10
Calcium (Ca)	.05	20
Titanium (Ti)	.002	1
	Parts per million	
Manganese (Mn)	10	5,000
Silver (Ag)	0.5	5,000
Arsenic (As)	200	10,000
Gold (Au)	10	500
Boron (B)	10	2,000
Barium (Ba)	20	5,000
Beryllium (Be)	1	1,000
Bismuth (Bi)	10	1,000
Cadmium (Cd)	20	500
Cobalt (Co)	5	2,000
Chromium (Cr)	10	5,000
Copper (Cu)	5	20,000
Lanthanum (La)	20	1,000
Molybdenum (Mo)	5	2,000
Niobium (Nb)	20	2,000
Nickel (Ni)	5	5,000
Lead (Pb)	10	20,000
Antimony (Sb)	100	10,000
Scandium (Sc)	5	100
Tin (Sn)	10	1,000
Strontium (Sr)	100	5,000
Vanadium (V)	10	10,000
Tungsten (W)	50	10,000
Yttrium (Y)	10	2,000
Zinc (Zn)	200	10,000
Zirconium (Zr)	10	1,000
Thorium (Th)	100	2,000
*Tantalum (Ta)	20	2,000

*Tantalum was determined on the M-1 fraction only

Table 2.--Chemical methods used for water analyses, Bisti, De-Na-Zin, and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico

[Water analyses were performed by W. H. Ficklin, J. R. Hassemer, and J. B. McHugh; ICP water analyses by J. M. Motooka; Radon analyses by W. H. Ficklin]

Property	Method	Reference
Alkalinity	Gran's plot titration with sulfuric acid	Orion Research, Inc. (1978)
Chloride, Fluoride, Nitrate, and Sulfate	Ion chromatography	Fishman and Pyen (1979)
Iron (>200 g/L), Lithium, Potassium, and Sodium	Flame atomic absorption spectrophotometry	Fishman and Downs (1966)
Silica	Flame atomic absorption spectrophotometry	Brown and others (1970)
Arsenic, and Iron (<200 g/L)	Flameless atomic absorption spectrophotometry	Perkin-Elmer Corp. (1977)
Molybdenum	Flameless atomic absorption spectrophotometry	(a)
Radon	Alpha particle detection	Dyck (1969)
Uranium	Laser-excitation fluorescence	Ward and Bondar (1979)
Specific conductance	Conductivity bridge	Brown and others (1970)
pH	pH meter	Brown and others (1970)
Temperature	Thermometer	Brown and others (1970)
Aluminum, Arsenic, Barium, Boron, Calcium, Copper, Iron, Magnesium, Manganese, Molybdenum, Titanium, and Zinc*	Inductively coupled plasma-atomic emission spectroscopy	(b)

(a) specific method undocumented, but is a modification of procedures as described by the Perkin-Elmer Corp (1977).

(b) specific method undocumented, but is a modification of procedures as described by Church (1981).

*Excluded from Table 7 are the following elements, all of which were below the detection limits of the ICP method (detection limits in micrograms per liter): antimony (200); beryllium (1); bismuth (300); cadmium (10); cerium (80); cobalt (125); chromium (15); germanium (150); gold (50); lanthanum (100); lead (100); nickel (25); niobium (15); phosphorous (100); silver (15); tin (100); tungsten (110); vanadium (15); and yttrium (3).

Table 3.--Limits of determination and reporting units for water samples

Constituent (Detection Limit)	Report paramenter	Comments
Calcium (0.1), Chloride (0.1) Fluoride (0.1), Lithium (.002) Magnesium (0.1), Nitrate (0.1), Potassium (0.1), Sodium (0.1), Strontium (.002), and Sulfate (0.01)	milligram per liter (ppm)	
Alkalinity (10)	Do.	Reported as bi-carbonate (HCO_3)
Silica (1)	Do.	Determined as silicon
*Charge balance	percent	
pH	pH units	
Specific conductance (10)	micro siemens per centimeter	
Temperature	degrees celsius	
Aluminum (36), Arsenic (1.0), Barium (1), Boron (6), Copper (5), Iron (0.5), Manganese (2), Molybdenum (1), Uranium (0.01), and Zinc (10)	micrograms per liter (ppb)	

*Charge balance calculations were performed to determine if approximate electrical neutrality exists among the major ionic constituents. Using ion concentrations in milliequivalents per liter,

$$\text{charge balance} = \frac{/\text{cations}/ - /\text{anions}/}{/\text{cations}/ + /\text{anions}/} \times 100.$$

Tables 4-8.--Spectrographic and other analytical data for nonmagnetic (NM-1) and magnetic (M-1) fractions of heavy-mineral concentrates derived from stream-sediment samples, <100-mesh sieved fractions derived from stream-sediment samples, water samples, and rock samples, Bisti, De-Na-Zin, and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico.

Abbreviations used on the element columns are as follows:

pct - percent

ppm - parts per million

s - semiquantitative emission spectrographic analyses

i - instrumental

N - not detected at the limit of determination

-- - no data available

Table 4. Analytical data for nonmagnetic (NM-1) concentrate fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s
CH001C3	36 16 9	108 13 24	.50	.05	.50	.15	150	N	N	N	20	>10,000
CH002C3	36 16 6	108 13 24	.50	.05	.30	.70	100	N	N	N	20	>10,000
CH003C3	36 16 2	108 13 39	.70	.05	.20	1.00	150	N	N	N	30	>10,000
CH004C3	36 16 15	108 13 45	.50	<.05	.15	.07	50	N	N	N	<20	>10,000
CH005C3	36 15 57	108 14 36	.70	<.05	.30	.05	300	N	N	N	20	>10,000
CH006C3	36 15 42	108 14 42	.70	.10	.30	.20	150	N	N	N	30	>10,000
CH007C3	36 15 33	108 15 2	.70	<.05	.10	.20	100	N	N	N	20	>10,000
CH008C3	36 16 47	108 14 41	.50	<.05	1.00	1.00	200	N	N	N	20	>10,000
CH009C3	36 16 40	108 15 10	1.00	.05	.70	1.00	300	N	N	N	20	>10,000
CH010C3	36 15 18	108 6 24	.50	.05	1.50	>2.00	150	N	N	N	20	>10,000
CH011C3	36 15 53	108 5 28	.70	<.05	.20	.70	100	N	N	N	<20	>10,000
CH012C3	36 16 2	108 4 55	1.50	<.05	.20	.30	200	N	N	N	30	>10,000
CH013C3	36 17 15	108 2 55	1.00	<.05	.30	1.00	200	N	N	N	20	>10,000
CH014C3	36 17 15	108 2 41	.70	.05	.70	1.00	150	N	N	N	20	>10,000
CH015C3	36 17 26	108 2 40	.70	.05	.50	1.00	200	N	N	N	20	>10,000
CH016C3	36 17 19	108 1 54	.50	.05	3.00	1.50	200	N	N	N	20	>10,000
CH017C3	36 18 18	108 1 57	.30	<.05	.20	.70	100	N	N	N	20	>10,000
CH019C3	36 18 42	108 1 27	1.00	.07	5.00	>2.00	500	N	N	N	20	>10,000
CH020C3	36 15 52	108 8 24	.50	.07	1.00	2.00	200	N	N	N	20	>10,000
CH022C3	36 17 2	108 6 33	.70	.05	.15	.10	200	N	N	N	20	>10,000
CH023C3	36 17 3	108 6 36	.70	.05	.20	.70	300	N	N	N	20	>10,000
CH024C3	36 16 20	108 10 2	.20	<.05	.10	.20	70	N	N	N	30	>10,000
CH025C3	36 9 8	107 57 49	.30	<.05	.20	1.00	100	N	N	N	20	>10,000
CH026C3	36 7 56	107 56 54	1.00	.07	1.00	>2.00	300	N	N	N	70	>10,000
CH028C3	36 9 44	107 54 44	.10	<.05	.20	.30	100	N	N	N	20	>10,000
CH029C3	36 9 42	107 54 43	.20	<.05	.15	.03	100	N	N	N	20	>10,000
CH030C3	36 9 45	107 54 53	.70	<.05	.30	.30	150	N	N	N	20	>10,000
CH031C3	36 9 18	107 55 28	1.00	.05	1.50	1.50	200	N	N	N	100	>10,000
CH032C3	36 9 44	107 55 23	<.10	<.05	.20	1.00	100	N	N	N	20	>10,000
CH033C3	36 9 43	107 55 47	.50	<.05	.30	2.00	150	N	N	N	20	>10,000
CH034C3	36 19 2	108 0 8	.70	.05	.20	.50	150	N	N	N	30	>10,000
CH035C3	36 19 15	108 0 15	.30	<.05	.30	1.00	200	N	N	N	30	>10,000
CH036C3	36 19 34	107 59 56	.70	<.05	.50	2.00	300	N	N	N	20	>10,000
CH037C3	36 19 37	107 59 56	.50	<.05	.50	2.00	300	N	N	N	20	>10,000
CH038C3	36 19 22	108 0 23	.15	<.05	<.10	.70	70	N	N	N	20	>10,000
CH039C3	36 19 32	108 0 36	.15	<.05	<.10	.10	150	N	N	N	20	>10,000
CH040C3	36 19 49	108 1 28	.20	<.05	.50	1.00	100	N	N	N	20	>10,000
CH041C3	36 19 50	108 1 32	.70	<.05	.20	.70	200	N	N	N	70	>10,000
CH043C3	36 20 16	108 3 4	3.00	<.05	1.50	>2.00	1,000	N	N	N	100	>10,000
CH044C3	36 20 13	108 3 5	.50	.05	.30	1.50	300	N	N	N	20	>10,000
CH045C3	36 20 43	108 3 50	.20	<.05	.50	2.00	200	N	N	N	20	>10,000
CH046C3	36 17 11	108 7 4	1.50	<.05	.20	.30	500	N	N	N	20	>10,000
CH047C3	36 17 59	108 6 38	1.50	<.05	.30	.70	300	N	N	N	20	>10,000
CH048C3	36 18 15	108 6 5	1.00	<.05	.20	.30	150	N	N	N	<20	>10,000
CH053C3	36 18 31	108 5 30	1.00	.20	1.00	.70	300	N	N	N	100	>10,000

Table 4. Analytical data for nonmagnetic (NM-1) concentrate fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s
CH001C3	N	N	N	N	<20	<10	N	N	N	10	30
CH002C3	N	N	N	N	<20	<10	N	N	N	10	30
CH003C3	2	N	N	N	<20	10	N	N	N	20	50
CH004C3	N	N	N	N	<20	<10	N	N	N	20	<20
CH005C3	2	N	N	N	<20	10	N	N	N	15	20
CH006C3	<2	N	N	N	<20	<10	N	N	N	20	50
CH007C3	2	N	N	N	<20	<10	200	N	N	10	30
CH008C3	2	N	N	N	<20	10	N	N	N	10	30
CH009C3	3	N	N	N	100	10	N	N	50	30	50
CH010C3	2	N	N	N	20	10	200	N	100	20	50
CH011C3	2	N	N	N	<20	<10	700	N	N	20	30
CH012C3	N	N	N	N	20	30	500	N	N	30	30
CH013C3	2	N	N	N	20	20	N	N	N	10	50
CH014C3	2	N	N	N	<20	15	100	N	N	10	30
CH015C3	2	N	N	N	<20	20	300	N	<50	10	30
CH016C3	<2	N	N	N	<20	<10	500	N	50	10	30
CH017C3	2	N	N	N	<20	<10	100	N	N	20	50
CH019C3	2	N	N	N	<20	15	1,500	N	50	10	100
CH020C3	3	N	N	N	<20	10	50	N	<50	10	70
CH022C3	N	N	N	N	<20	20	N	N	N	10	30
CH023C3	2	N	N	N	<20	15	200	N	N	10	50
CH024C3	N	N	N	N	<20	<10	N	N	N	10	20
CH025C3	2	N	N	N	<20	<10	500	N	50	10	50
CH026C3	2	N	N	N	20	<10	300	N	100	10	100
CH028C3	3	N	N	N	<20	<10	N	N	N	10	50
CH029C3	N	N	N	N	<20	<10	N	N	N	10	20
CH030C3	<2	N	N	N	<20	<10	N	N	<50	10	70
CH031C3	2	N	N	N	<20	<10	100	N	70	10	70
CH032C3	3	N	N	N	<20	<10	50	N	50	10	30
CH033C3	2	N	N	N	<20	<10	70	N	<50	10	50
CH034C3	3	N	N	N	<20	<10	>2,000	N	70	15	150
CH035C3	<2	N	N	N	<20	<10	200	N	<50	15	50
CH036C3	2	N	N	N	<20	<10	300	N	70	10	50
CH037C3	2	N	N	N	<20	<10	1,000	N	70	20	100
CH038C3	<2	N	N	N	<20	<10	50	N	N	10	30
CH039C3	2	N	N	N	<20	<10	50	N	N	15	50
CH040C3	<2	N	N	N	30	<10	70	N	50	15	50
CH041C3	2	N	N	N	20	10	2,000	N	N	20	70
CH043C3	2	N	N	N	20	10	300	N	150	20	70
CH044C3	2	N	N	N	20	10	700	N	50	20	70
CH045C3	3	N	N	N	<20	<10	700	N	50	30	100
CH046C3	2	N	N	N	<20	15	50	N	N	20	50
CH047C3	2	N	N	N	<20	20	150	N	<50	30	70
CH048C3	3	N	N	N	<20	20	50	N	N	30	70
CH053C3	--	N	N	N	N	10	200	N	N	N	N

Table 4. Analytical data for nonmagnetic (NM-1) concentrate fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s
CH001C3	N	N	N	>10,000	30	N	30	N	>2,000	N
CH002C3	N	10	N	>10,000	30	N	50	N	>2,000	N
CH003C3	N	70	N	10,000	50	N	100	N	>2,000	N
CH004C3	N	10	N	>10,000	30	N	20	N	>2,000	N
CH005C3	N	N	N	10,000	30	N	<20	N	2,000	N
CH006C3	N	N	N	7,000	50	N	50	N	>2,000	N
CH007C3	N	20	N	7,000	30	N	70	N	>2,000	N
CH008C3	N	20	N	10,000	50	N	100	N	>2,000	N
CH009C3	N	70	N	7,000	70	N	100	N	>2,000	N
CH010C3	N	70	N	10,000	100	N	200	N	>2,000	N
CH011C3	N	30	N	>10,000	50	N	150	N	>2,000	N
CH012C3	N	10	N	10,000	30	N	70	N	>2,000	N
CH013C3	N	50	70	10,000	70	N	100	N	>2,000	N
CH014C3	N	30	500	7,000	70	N	100	N	>2,000	N
CH015C3	N	50	100	10,000	70	N	150	N	>2,000	N
CH016C3	N	30	50	10,000	70	N	150	N	>2,000	N
CH017C3	N	30	70	10,000	30	N	70	N	>2,000	N
CH019C3	N	100	150	10,000	100	N	500	N	>2,000	<200
CH020C3	N	70	N	>10,000	70	N	150	N	>2,000	N
CH022C3	N	N	N	>10,000	30	N	20	N	>2,000	N
CH023C3	N	50	N	>10,000	30	N	150	N	>2,000	N
CH024C3	N	N	N	10,000	20	N	20	N	>2,000	N
CH025C3	N	50	N	>10,000	30	N	200	N	>2,000	N
CH026C3	N	70	70	1,500	100	N	300	N	>2,000	N
CH028C3	N	20	N	>10,000	30	N	70	N	>2,000	N
CH029C3	N	N	N	>10,000	<20	N	20	N	2,000	N
CH030C3	N	10	N	>10,000	30	N	50	N	>2,000	N
CH031C3	N	30	N	10,000	70	N	150	N	>2,000	N
CH032C3	N	70	100	10,000	50	N	200	N	>2,000	N
CH033C3	N	100	20	>10,000	50	N	200	N	>2,000	N
CH034C3	N	100	50	10,000	50	N	300	N	>2,000	500
CH035C3	N	50	30	7,000	30	N	150	N	>2,000	N
CH036C3	N	100	150	7,000	70	N	300	N	>2,000	<200
CH037C3	N	50	50	10,000	50	N	200	N	>2,000	200
CH038C3	N	N	70	5,000	20	N	30	N	>2,000	N
CH039C3	N	N	<20	>10,000	<20	N	50	N	>2,000	N
CH040C3	N	30	N	10,000	50	N	100	N	>2,000	N
CH041C3	N	70	N	10,000	50	N	300	N	>2,000	500
CH043C3	N	20	30	7,000	100	N	200	N	>2,000	200
CH044C3	N	50	N	10,000	50	N	200	N	>2,000	200
CH045C3	N	100	100	10,000	70	N	300	N	>2,000	300
CH046C3	N	10	N	10,000	50	N	50	N	>2,000	N
CH047C3	N	50	N	10,000	70	N	150	N	>2,000	N
CH048C3	N	<10	N	>10,000	30	N	50	N	>2,000	N
CH053C3	N	--	30	>10,000	70	N	150	N	--	N

Table 4. Analytical data for nonmagnetic (NM-1) concentrate fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].--continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s
CH054C3	36 18 44	108 5 28	2.00	.20	3.00	2.00	300	N	N	N	50	>10,000
CH056C3	36 19 17	108 6 28	.50	.10	1.00	1.00	100	N	N	N	50	>10,000
CH057C3	36 19 1	108 6 34	1.00	.15	1.50	1.00	500	N	N	N	150	>10,000
CH058C3	36 18 59	108 4 46	1.00	.10	1.00	1.00	150	N	N	N	50	>10,000
CH059C3	36 18 50	108 4 47	1.00	.20	1.00	.70	200	N	N	N	30	>10,000
CH060C3	36 19 45	108 4 13	.50	.07	1.50	1.50	150	N	N	N	50	>10,000
CH061C3	36 19 47	108 3 41	.10	<.05	1.00	1.50	70	N	N	N	20	>10,000
CH062C3	36 19 45	108 3 4	.10	.05	.70	1.00	100	N	N	N	20	>10,000
CH065C3	36 20 51	108 3 53	.10	<.05	.20	.20	30	N	N	N	20	>10,000
CH066C3	36 20 16	108 6 22	.15	.05	.50	.70	100	N	N	N	30	>10,000
CH067C3	36 20 14	108 6 13	.30	.05	.50	.70	100	N	N	N	20	>10,000
CH069C3	36 9 17	107 56 44	.20	.07	.50	1.00	150	N	N	N	50	>10,000
CH070C3	36 9 19	107 56 30	.15	.10	1.50	2.00	200	N	N	N	50	>10,000
CH071C3	36 9 8	107 56 33	.20	.07	1.00	1.50	150	N	N	N	50	>10,000

Table 4. Analytical data for nonmagnetic (NM-1) concentrate fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].--continued

Sample	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s
CH054C3	--	N	N	10	N	15	300	N	50	10	N
CH056C3	--	N	N	N	N	10	500	N	<50	N	30
CH057C3	--	N	N	N	70	10	200	N	<50	N	N
CH058C3	--	N	N	N	N	<10	1,000	N	N	10	20
CH059C3	--	N	N	N	N	15	200	N	N	N	20
CH060C3	--	N	N	N	N	20	500	N	<50	N	30
CH061C3	--	N	N	N	N	30	500	N	<50	N	30
CH062C3	--	N	N	N	N	N	500	N	N	N	200
CH065C3	--	N	N	N	N	N	500	N	N	N	50
CH066C3	--	N	N	N	N	N	200	N	N	N	N
CH067C3	--	N	N	N	N	30	200	N	N	N	100
CH069C3	--	N	N	N	N	N	200	N	N	N	50
CH070C3	--	N	N	N	100	N	500	N	N	N	50
CH071C3	--	N	N	N	70	<20	300	N	N	N	50

Table 4.Analytical data for nonmagnetic (NM-1) concentrate fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].--continued

Sample	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s
CH054C3	N	--	N	>10,000	100	N	300	N	--	N
CH056C3	N	--	N	>10,000	70	N	200	N	--	N
CH057C3	N	--	N	>10,000	100	N	200	N	--	N
CH058C3	N	--	20	>10,000	70	N	200	N	--	N
CH059C3	N	--	N	>10,000	70	N	150	N	--	N
CH060C3	N	--	300	>10,000	70	N	300	N	--	N
CH061C3	N	--	200	>10,000	100	N	300	N	--	N
CH062C3	N	--	200	>10,000	70	N	500	N	--	N
CH065C3	N	--	N	>10,000	50	N	100	N	--	N
CH066C3	N	--	N	>10,000	70	N	150	N	--	N
CH067C3	N	--	N	>10,000	70	N	200	N	--	N
CH069C3	N	--	300	>10,000	50	N	200	N	--	N
CH070C3	N	--	200	>10,000	100	N	700	N	--	N
CH071C3	N	--	50	>10,000	70	N	700	N	--	N

Table 5. Analytical data for magnetic (M-1) concentrate fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s
CH001C2	36 16 9	108 13 24	20	.10	.50	.5	>10,000	N	N	N	50	5,000
CH002C2	36 16 6	108 13 24	20	.20	.20	2.0	10,000	N	N	N	70	10,000
CH003C2	36 16 2	108 13 39	30	.50	.15	>2.0	10,000	N	N	N	70	5,000
CH004C2	36 16 15	108 13 45	15	.10	.15	1.5	10,000	N	N	N	70	10,000
CH005C2	36 15 57	108 14 36	15	.20	.20	.2	10,000	N	N	N	50	10,000
CH006C2	36 15 42	108 14 42	20	.30	.20	.5	10,000	N	N	N	100	7,000
CH007C2	36 15 33	108 15 2	15	.30	.10	>2.0	7,000	N	N	N	70	>10,000
CH008C2	36 16 47	108 14 41	30	.50	1.00	>2.0	>10,000	N	N	N	100	10,000
CH009C2	36 16 40	108 15 10	30	.50	1.00	>2.0	>10,000	N	N	N	300	5,000
CH010C2	36 15 18	108 6 24	10	.20	.50	>2.0	10,000	N	N	N	150	1,000
CH011C2	36 15 53	108 5 28	20	.30	.10	>2.0	10,000	N	N	N	150	7,000
CH012C2	36 16 2	108 4 55	15	.20	.10	>2.0	5,000	N	N	N	50	>10,000
CH013C2	36 17 15	108 2 55	15	.20	.50	>2.0	5,000	N	N	N	100	>10,000
CH014C2	36 17 15	108 2 41	20	.50	.50	>2.0	10,000	1	N	N	200	10,000
CH015C2	36 17 26	108 2 40	20	.70	1.00	>2.0	>10,000	N	N	N	100	10,000
CH016C2	36 17 19	108 1 54	15	.70	1.00	>2.0	10,000	N	N	N	200	7,000
CH017C2	36 18 18	108 1 57	20	.50	.50	>2.0	10,000	N	N	N	150	>10,000
CH019C2	36 18 42	108 1 27	10	.50	.50	>2.0	10,000	N	N	N	20	3,000
CH020C2	36 15 52	108 8 24	20	.20	1.00	>2.0	10,000	1	N	N	300	>10,000
CH022C2	36 17 2	108 6 33	20	.20	.10	1.5	5,000	3	N	N	100	>10,000
CH023C2	36 17 3	108 6 36	20	.30	.50	>2.0	>10,000	N	N	N	100	10,000
CH024C2	36 16 20	108 10 2	20	.50	1.50	>2.0	>10,000	N	N	N	100	>10,000
CH025C2	36 9 8	107 57 49	20	.30	.10	>2.0	10,000	N	N	N	100	3,000
CH026C2	36 7 56	107 56 54	15	.30	.15	1.0	7,000	N	N	N	200	1,000
CH028C2	36 9 44	107 54 44	15	.20	.15	>2.0	7,000	N	N	N	200	10,000
CH029C2	36 9 42	107 54 43	7	<.05	<.10	.3	2,000	N	N	N	70	5,000
CH030C2	36 9 45	107 54 53	20	.30	.15	2.0	10,000	N	N	N	100	>10,000
CH031C2	36 9 18	107 55 28	15	.20	.20	1.0	10,000	N	N	N	300	3,000
CH032C2	36 9 44	107 55 23	30	.70	.20	>2.0	10,000	N	N	N	100	2,000
CH033C2	36 9 43	107 55 47	15	.20	.15	>2.0	7,000	N	N	N	100	3,000
CH034C2	36 19 2	108 0 8	15	.50	.15	>2.0	10,000	N	N	N	50	>10,000
CH035C2	36 19 15	108 0 15	20	.50	.20	>2.0	>10,000	N	N	N	50	5,000
CH036C2	36 19 34	107 59 56	15	.30	.15	>2.0	10,000	N	N	N	30	3,000
CH037C2	36 19 37	107 59 56	20	.50	.20	>2.0	>10,000	N	N	N	100	2,000
CH038C2	36 19 22	108 0 23	15	.20	.15	>2.0	>10,000	N	N	N	50	>10,000
CH039C2	36 19 32	108 0 36	15	.20	.20	>2.0	>10,000	N	N	N	70	>10,000
CH040C2	36 19 49	108 1 28	15	.70	.70	>2.0	>10,000	N	N	N	500	10,000
CH041C2	36 19 50	108 1 32	20	.50	.15	>2.0	10,000	N	N	N	50	>10,000
CH043C2	36 20 16	108 3 4	15	.50	1.00	>2.0	>10,000	N	N	N	500	1,500
CH044C2	36 20 13	108 3 5	20	.70	.70	>2.0	>10,000	N	N	N	70	>10,000
CH045C2	36 20 43	108 3 50	20	.50	1.00	>2.0	>10,000	N	N	N	100	3,000
CH046C2	36 17 11	108 7 4	20	.20	.20	1.0	10,000	N	N	N	100	10,000
CH047C2	36 17 59	108 6 38	30	.70	.20	>2.0	10,000	N	N	N	100	>10,000
CH048C2	36 18 15	108 6 5	20	.20	.20	2.0	5,000	5	N	N	50	>10,000
CH053C2	36 18 31	108 5 30	50	1.00	1.50	>2.0	>10,000	<1	N	N	300	>10,000

Table 5. Analytical data for magnetic (M-1) concentrate fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s
CH001C2	3	N	N	70	20	200	100	10	N	70	200	N
CH002C2	3	N	N	100	20	300	300	10	50	100	200	N
CH003C2	2	N	N	50	100	150	500	N	100	70	150	N
CH004C2	3	N	N	100	30	150	150	N	N	100	300	N
CH005C2	2	N	N	70	20	100	70	N	N	70	200	N
CH006C2	5	N	N	50	50	150	150	N	70	70	300	N
CH007C2	2	N	N	30	100	70	300	N	70	30	150	N
CH008C2	3	N	N	150	200	500	500	N	70	150	300	N
CH009C2	3	N	N	70	200	300	500	15	70	70	700	N
CH010C2	3	N	N	30	150	150	500	N	100	50	100	N
CH011C2	2	N	N	50	300	200	700	N	100	70	100	N
CH012C2	<2	N	N	20	50	100	300	10	70	50	30	N
CH013C2	2	N	N	30	50	100	500	N	70	50	100	N
CH014C2	<2	N	N	50	50	150	1,500	<10	100	70	100	N
CH015C2	2	N	N	30	150	200	1,500	N	70	30	150	N
CH016C2	<2	N	N	50	100	150	1,000	N	100	30	70	N
CH017C2	<2	N	N	50	200	200	2,000	N	100	50	150	N
CH019C2	<2	N	N	10	100	30	1,000	N	100	10	50	N
CH020C2	5	N	N	70	200	300	700	10	50	100	100	N
CH022C2	3	N	N	100	20	500	300	30	N	150	200	N
CH023C2	3	N	N	70	100	300	1,000	10	100	100	200	N
CH024C2	2	N	N	70	100	300	1,000	N	70	70	200	N
CH025C2	2	N	N	50	200	200	1,000	N	200	50	70	N
CH026C2	5	N	N	70	50	200	100	N	N	70	300	N
CH028C2	5	N	N	100	100	500	500	20	100	100	300	N
CH029C2	3	N	N	N	50	50	70	N	N	20	30	N
CH030C2	5	N	N	70	50	500	300	20	50	100	500	N
CH031C2	5	N	N	100	30	300	500	20	70	100	300	N
CH032C2	N	N	N	70	200	300	1,000	N	150	50	200	N
CH033C2	<2	N	N	50	200	150	500	N	100	30	150	N
CH034C2	<2	N	N	50	100	150	>2,000	N	200	15	100	N
CH035C2	N	N	N	30	200	150	1,000	N	200	10	70	N
CH036C2	N	N	N	30	100	70	1,000	N	100	<10	50	N
CH037C2	N	N	N	50	100	200	>2,000	N	100	10	70	N
CH038C2	<2	N	N	30	70	300	2,000	N	100	20	100	N
CH039C2	2	N	N	20	100	100	1,000	N	70	10	200	N
CH040C2	<2	N	N	50	150	150	1,000	N	150	20	200	N
CH041C2	N	N	N	50	100	150	1,000	N	70	<10	30	N
CH043C2	2	N	N	20	100	100	300	N	100	15	100	N
CH044C2	N	N	N	50	100	100	>2,000	N	150	<10	100	N
CH045C2	<2	N	N	50	150	200	700	N	150	<10	100	N
CH046C2	3	N	N	70	50	300	300	30	<50	100	150	N
CH047C2	2	N	N	150	200	500	500	50	50	150	200	N
CH048C2	<2	N	N	150	70	500	500	70	<50	200	200	N
CH053C2	--	N	N	150	700	200	1,000	15	100	150	20	N

Table 5. Analytical data for magnetic (M-1) concentrate fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Ta-ppm s
CH001C2	10	N	1,000	200	N	70	N	70	N	N
CH002C2	15	N	1,000	200	N	100	N	100	N	N
CH003C2	30	N	300	300	N	200	N	200	N	N
CH004C2	10	N	700	150	N	70	N	200	N	N
CH005C2	N	N	500	100	N	20	N	70	N	N
CH006C2	15	N	500	150	N	50	N	100	N	N
CH007C2	30	N	300	200	N	100	N	300	N	N
CH008C2	30	N	500	200	N	200	500	700	N	N
CH009C2	30	200	500	300	N	150	N	700	<200	N
CH010C2	30	N	<200	200	N	200	N	1,000	N	N
CH011C2	30	N	200	200	N	200	N	500	N	N
CH012C2	20	N	200	150	N	100	N	200	N	N
CH013C2	20	N	200	200	N	150	N	500	N	N
CH014C2	30	N	300	200	N	500	N	500	200	N
CH015C2	50	N	300	200	N	300	N	500	N	N
CH016C2	50	50	200	200	N	300	N	700	200	N
CH017C2	50	N	500	300	N	1,500	N	1,000	300	N
CH019C2	30	N	<200	150	N	500	N	500	200	N
CH020C2	30	N	500	200	N	200	N	500	N	N
CH022C2	10	N	500	200	N	100	N	100	<200	N
CH023C2	30	20	500	200	N	200	N	200	200	<50
CH024C2	30	N	500	300	N	200	N	300	<200	N
CH025C2	100	N	200	200	N	500	N	1,500	<200	<50
CH026C2	20	N	200	200	N	100	N	100	N	N
CH028C2	30	N	500	300	N	200	N	200	N	N
CH029C2	N	N	500	70	N	N	N	50	N	N
CH030C2	30	N	500	200	N	100	N	700	N	N
CH031C2	20	N	500	200	N	150	N	150	N	N
CH032C2	50	30	300	300	N	300	N	2,000	300	<50
CH033C2	30	N	500	200	N	200	N	2,000	<200	N
CH034C2	50	N	500	200	N	500	N	2,000	300	N
CH035C2	50	<20	200	200	N	500	N	500	<200	50
CH036C2	30	N	<200	200	N	300	N	1,000	200	N
CH037C2	70	N	<200	150	N	1,000	N	1,000	300	N
CH038C2	30	N	500	200	N	500	N	700	500	N
CH039C2	15	20	500	200	N	300	N	500	<200	N
CH040C2	50	20	200	200	N	700	N	1,000	200	N
CH041C2	70	N	300	200	N	700	N	1,500	200	N
CH043C2	30	N	500	200	N	200	N	200	<200	N
CH044C2	70	N	<200	200	N	700	N	1,000	500	70
CH045C2	50	N	<200	200	N	500	N	1,500	200	50
CH046C2	20	N	700	200	N	100	N	200	N	N
CH047C2	30	N	1,000	200	N	500	N	1,000	<200	N
CH048C2	20	N	700	200	N	200	N	500	N	<50
CH053C2	--	N	1,000	1,000	N	500	N	--	N	--

Table 5. Analytical data for magnetic (M-1) concentrate fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].--continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s
CH054C2	36 18 44	108 5 28	>50	1.00	3.00	>2.0	>10,000	5	N	N	100	>10,000
CH056C2	36 19 17	108 6 28	50	.50	1.00	>2.0	>10,000	N	N	N	100	>10,000
CH057C2	36 19 1	108 6 34	>50	.70	1.50	>2.0	>10,000	N	N	N	300	>10,000
CH058C2	36 18 59	108 4 46	>50	.50	.20	>2.0	>10,000	N	N	N	N	10,000
CH059C2	36 18 50	108 4 47	>50	1.00	1.50	>2.0	>10,000	N	N	N	50	>10,000
CH060C3	36 19 45	108 4 13	>50	.70	1.00	>2.0	>10,000	N	N	N	100	>10,000
CH061C2	36 19 47	108 3 41	>50	.70	.70	>2.0	>10,000	N	N	N	50	2,000
CH062C2	36 19 45	108 3 4	>50	.70	1.00	>2.0	>10,000	N	N	N	70	10,000
CH065C2	36 20 51	108 3 53	>50	1.00	.70	>2.0	>10,000	N	N	N	150	>10,000
CH066C2	36 20 16	108 6 22	>50	1.00	1.50	>2.0	>10,000	N	N	N	100	>10,000
CH067C2	36 20 14	108 6 13	>50	1.00	1.50	>2.0	>10,000	N	N	N	150	>10,000
CH069C2	36 9 17	107 56 44	>50	.70	1.00	>2.0	>10,000	N	N	N	100	7,000
CH070C2	36 9 19	107 56 30	>50	.70	.70	>2.0	>10,000	N	N	N	100	7,000
CH071C2	36 9 8	107 56 33	>50	1.00	.70	>2.0	>10,000	N	N	N	100	7,000

Table 5. Analytical data for magnetic (M-1) concentrate fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].--continued

Sample	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s
CH054C2	--	N	N	300	300	500	1,500	30	100	500	100	N
CH056C2	--	N	N	100	1,000	300	1,000	N	100	50	20	N
CH057C2	--	N	N	200	300	300	1,500	15	100	200	30	N
CH058C2	--	N	N	150	500	200	700	N	70	50	20	N
CH059C2	--	N	N	200	1,000	200	1,500	N	100	100	50	N
CH060C3	--	N	N	150	500	300	1,500	N	100	70	70	N
CH061C2	--	N	N	100	500	200	2,000	N	100	50	50	N
CH062C2	--	N	N	70	1,500	150	2,000	N	150	30	150	N
CH065C2	--	N	N	100	1,000	150	1,500	N	100	50	50	N
CH066C2	--	N	N	150	300	300	1,500	N	70	70	20	N
CH067C2	--	N	N	100	500	300	1,500	N	100	70	30	N
CH069C2	--	N	N	150	2,000	200	1,500	N	100	100	20	N
CH070C2	--	N	N	150	3,000	200	1,000	N	100	70	50	N
CH071C2	--	N	N	150	5,000	150	2,000	N	100	70	70	N

Table 5. Analytical data for magnetic (M-1) concentrate fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].--continued

Sample	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Ta-ppm s
CH054C2	--	N	700	700	N	1,000	N	--	N	--
CH056C2	--	N	1,000	1,000	N	700	N	--	N	--
CH057C2	--	N	700	700	N	1,000	N	--	N	--
CH058C2	--	N	N	1,500	N	200	N	--	N	--
CH059C2	--	N	700	1,000	N	500	N	--	N	--
CH060C3	--	N	N	1,000	N	500	1,000	--	N	--
CH061C2	--	N	N	1,500	N	1,500	N	--	<200	--
CH062C2	--	N	N	700	N	1,000	N	--	N	--
CH065C2	--	N	200	700	N	1,500	N	--	200	--
CH066C2	--	N	200	1,500	N	1,000	500	--	N	--
CH067C2	--	N	N	1,000	N	1,000	N	--	N	--
CH069C2	--	N	N	1,000	N	1,000	N	--	N	--
CH070C2	--	N	N	1,000	N	700	N	--	N	--
CH071C2	--	N	N	1,000	N	1,000	N	--	<200	--

Table 6. Analytical data for <100-mesh sieved fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s
CH001	36 16 9	108 13 24	1.0	.3	1.0	.3	1,000	N	N	N	20	1,000
CH002	36 16 6	108 13 24	2.0	.3	2.0	.5	1,500	N	N	N	50	1,500
CH003	36 16 2	108 13 39	2.0	.5	1.5	.5	1,000	N	N	N	50	1,000
CH004	36 16 15	108 13 45	3.0	.5	2.0	1.0	1,000	N	N	N	30	1,500
CH005	36 15 57	108 14 36	2.0	.3	1.5	.3	700	N	N	N	50	1,000
CH006	36 15 42	108 14 42	2.0	.5	1.0	.3	500	N	N	N	50	700
CH007	36 15 33	108 15 2	1.5	.3	1.0	.3	500	N	N	N	30	1,500
CH008	36 16 47	108 14 41	2.0	.3	1.0	1.0	700	N	N	N	20	1,500
CH009	36 16 40	108 15 10	1.5	.2	1.0	.2	500	N	N	N	50	1,500
CH010	36 15 18	108 6 24	2.0	.2	.7	.5	700	N	N	N	50	1,000
CH011	36 15 53	108 5 28	3.0	.3	1.0	1.0	700	N	N	N	50	2,000
CH012	36 16 2	108 4 55	2.0	.5	1.0	.7	1,000	N	N	N	30	>5,000
CH013	36 17 15	108 2 55	3.0	.7	1.0	.7	1,000	N	N	N	50	5,000
CH014	36 17 15	108 2 41	2.0	.3	1.5	.5	700	N	N	N	50	5,000
CH015	36 17 26	108 2 40	2.0	.3	1.5	.5	500	N	N	N	50	3,000
CH016	36 17 19	108 1 54	3.0	.5	1.5	.7	1,000	N	N	N	50	3,000
CH017	36 18 18	108 1 57	3.0	.3	1.5	1.0	700	N	N	N	50	5,000
CH019	36 18 42	108 1 27	3.0	.3	1.0	1.0	700	N	N	N	30	2,000
CH020	36 15 52	108 8 24	2.0	.3	1.0	.7	500	N	N	N	50	2,000
CH022	36 17 2	108 6 33	3.0	.5	1.5	.7	1,500	N	N	N	50	5,000
CH023	36 17 3	108 6 36	3.0	.5	1.0	.5	700	N	N	N	50	1,500
CH024	36 16 20	108 10 2	3.0	.3	1.0	.7	700	N	N	N	50	>5,000
CH025	36 9 8	107 57 49	2.0	.2	.7	1.0	700	N	N	N	50	5,000
CH026	36 7 56	107 56 54	1.5	.3	.7	.3	300	N	N	N	50	700
CH028	36 9 44	107 54 44	2.0	.5	1.0	.7	500	N	N	N	50	5,000
CH029	36 9 42	107 54 43	2.0	.5	1.0	.5	1,000	N	N	N	30	3,000
CH030	36 9 45	107 54 53	2.0	.3	1.0	.3	300	N	N	N	50	2,000
CH031	36 9 18	107 55 28	1.5	.3	1.0	.5	500	N	N	N	50	2,000
CH032	36 9 44	107 55 23	3.0	.2	.7	1.0	500	N	N	N	70	3,000
CH033	36 9 43	107 55 47	2.0	.2	.7	1.0	500	N	N	N	50	>5,000
CH034	36 19 2	108 0 8	2.0	.3	.7	.5	500	N	N	N	50	3,000
CH035	36 19 15	108 0 15	2.0	.3	.7	.5	700	N	N	N	50	3,000
CH036	36 19 34	107 59 56	3.0	.3	.5	.5	500	N	N	N	50	2,000
CH037	36 19 37	107 59 56	3.0	.3	.5	.5	500	N	N	N	50	>5,000
CH038	36 19 22	108 0 23	2.0	.3	.5	.5	700	N	N	N	30	>5,000
CH039	36 19 32	108 0 36	2.0	.3	.5	.7	2,000	N	N	N	50	5,000
CH040	36 19 49	108 1 28	2.0	.3	.5	.5	700	N	N	N	50	>5,000
CH041	36 19 50	108 1 32	5.0	.2	.5	>1.0	1,000	N	N	N	50	3,000
CH043	36 20 16	108 3 4	3.0	.3	.5	1.0	500	N	N	N	50	3,000
CH044	36 20 13	108 3 5	3.0	.2	.5	.7	1,000	N	N	N	50	5,000
CH045	36 20 43	108 3 50	1.5	.2	.2	.7	500	N	N	N	30	2,000
CH046	36 17 11	108 7 4	2.0	.5	1.5	.3	700	N	N	N	50	3,000
CH047	36 17 59	108 6 38	3.0	.3	1.5	1.0	700	N	N	N	30	2,000
CH048	36 18 15	108 6 5	5.0	.5	2.0	1.0	1,500	N	N	N	30	5,000
CH053	36 18 31	108 5 30	3.0	.7	2.0	1.0	1,500	N	N	N	50	>5,000

Table 6. Analytical data for <100-mesh sieved fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s
CH001	1.0	N	N	N	<10	15	30	N	N	5	20	N
CH002	1.5	N	N	10	15	20	50	N	<20	7	20	N
CH003	1.5	N	N	20	30	20	70	N	<20	7	30	N
CH004	1.0	N	N	15	20	20	150	N	<20	10	30	N
CH005	1.5	N	N	10	10	15	20	N	N	10	20	N
CH006	1.5	N	N	10	15	20	30	N	N	15	50	N
CH007	1.5	N	N	7	10	20	50	N	N	10	30	N
CH008	1.0	N	N	15	30	15	50	N	<20	10	30	N
CH009	1.5	N	N	10	20	10	20	N	N	10	30	N
CH010	1.5	N	N	7	15	15	20	N	N	10	20	N
CH011	1.5	N	N	20	20	50	100	N	<20	10	30	N
CH012	1.0	N	N	20	20	50	100	N	N	15	30	N
CH013	1.0	N	N	20	30	50	100	N	N	20	50	N
CH014	1.0	N	N	15	100	20	100	N	N	15	50	N
CH015	1.5	N	N	10	15	20	50	N	N	15	30	N
CH016	1.5	N	N	15	20	30	70	N	N	15	30	N
CH017	1.5	N	N	20	15	50	100	N	N	15	30	N
CH019	1.5	N	N	7	15	15	100	N	N	7	30	N
CH020	1.5	N	N	15	20	15	100	N	N	10	30	N
CH022	1.5	N	N	15	30	50	100	N	N	20	50	N
CH023	1.5	N	N	15	50	50	70	N	N	15	50	N
CH024	1.0	N	N	10	20	30	50	N	N	10	30	N
CH025	1.5	N	N	7	20	15	70	N	<20	15	20	N
CH026	2.0	N	N	5	20	15	30	N	N	10	30	N
CH028	2.0	N	N	10	20	30	50	N	N	10	30	N
CH029	2.0	N	N	10	20	15	70	N	N	7	30	N
CH030	1.5	N	N	7	20	20	50	N	N	10	20	N
CH031	1.5	N	N	15	20	10	50	N	N	7	20	N
CH032	1.0	N	N	5	200	15	150	N	<20	15	30	N
CH033	1.0	N	N	7	100	15	100	N	N	10	20	N
CH034	1.5	N	N	7	15	20	50	N	N	7	20	N
CH035	1.0	N	N	5	20	20	70	N	N	7	30	N
CH036	1.0	N	N	5	20	15	150	N	N	7	30	N
CH037	1.0	N	N	7	20	15	100	N	N	10	30	N
CH038	1.0	N	N	5	10	15	30	N	N	10	15	N
CH039	1.0	N	N	5	20	15	50	N	N	10	20	N
CH040	1.0	N	N	7	10	15	50	N	N	10	20	N
CH041	1.0	N	N	7	20	15	200	N	<20	10	20	N
CH043	1.0	N	N	5	20	15	100	N	N	10	15	N
CH044	1.0	N	N	5	10	15	70	N	N	10	20	N
CH045	1.5	N	N	<5	100	10	50	N	N	7	15	N
CH046	1.5	N	N	10	15	30	70	N	N	10	30	N
CH047	1.5	N	N	10	15	20	70	N	N	10	30	N
CH048	1.5	N	N	15	20	50	100	N	N	10	30	N
CH053	1.0	N	[illegible]	[illegible]	[illegible]	100	[illegible]	N	20	20	70	[illegible]

Table 6. Analytical data for <100-mesh sieved fractions derived from stream-sediment samples, Bisti, De-na-zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	Sc-ppm	Sn-ppm	Sr-ppm	V-ppm	W-ppm	Y-ppm	Zn-ppm	Zr-ppm	Th-ppm	U-ppm
	s	s	s	s	s	s	s	s	s	i
CH001	<5	N	300	30	N	15	N	150	N	.70
CH002	10	N	500	50	N	30	N	700	N	.90
CH003	10	N	300	50	N	30	N	700	N	.70
CH004	15	N	500	70	N	50	N	>1,000	N	.80
CH005	5	N	300	50	N	20	N	150	N	.70
CH006	7	N	300	50	N	20	N	200	N	.70
CH007	7	N	200	50	N	20	N	700	N	.80
CH008	7	N	500	50	N	30	N	1,000	N	.60
CH009	5	N	500	30	N	20	N	100	N	.50
CH010	7	N	500	50	N	20	N	200	N	.90
CH011	10	N	700	70	N	30	N	1,000	N	1.10
CH012	10	N	700	70	N	30	N	500	N	.60
CH013	10	N	1,000	70	N	30	N	500	N	.50
CH014	7	N	700	50	N	20	N	300	N	.50
CH015	5	N	700	50	N	20	N	150	N	.50
CH016	10	N	700	70	N	20	N	500	N	.40
CH017	10	N	1,000	70	N	30	N	1,000	N	.20
CH019	7	N	700	50	N	20	N	700	N	.40
CH020	5	N	700	50	N	20	N	700	N	.30
CH022	10	N	1,000	70	N	30	N	700	N	.80
CH023	5	N	700	50	N	20	N	500	N	.80
CH024	5	N	500	50	N	50	N	1,000	N	.50
CH025	5	N	500	50	N	50	N	>1,000	N	.90
CH026	5	N	300	30	N	20	N	300	N	.90
CH028	7	[illegible]	700	7[illegible]	N	20	N	70[illegible]	[illegible]	[illegible]
CH029	5	N	500	[illegible]	N	20	N	500	N	.60
CH030	5	N	500	50	N	15	N	200	N	.30
CH031	5	N	500	50	N	20	N	700	N	.40
CH032	<5	N	300	70	N	30	N	>1,000	N	.70
CH033	10	N	300	70	N	30	N	>1,000	N	.50
CH034	5	N	200	50	N	20	N	500	N	.50
CH035	5	N	300	50	N	30	N	700	N	.10
CH036	5	N	200	50	N	50	N	700	N	.90
CH037	5	N	200	50	N	30	N	1,000	N	.50
CH038	10	N	200	50	N	20	N	>1,000	N	.50
CH039	7	N	300	50	N	30	N	>1,000	N	.60
CH040	10	N	200	50	N	30	N	700	N	.40
CH041	5	N	200	70	N	50	N	>1,000	N	.80
CH043	10	N	200	50	N	30	N	>1,000	N	.60
CH044	7	N	500	50	N	30	N	>1,000	N	.40
CH045	7	N	300	30	N	20	N	1,000	N	.60
CH046	10	N	700	50	N	15	N	300	N	.70
CH047	10	N	700	50	N	70	N	1,000	N	.50
CH048	10	N	1,000	70	N	30	N	200	N	.70
CH053	10	N	1,000	200	N	50	N	1,000	N	.95

Table 6. Analytical data for <100-mesh sieved fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].--continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s
CH054	36 18 44	108 5 28	2.0	.7	2.0	.5	1,000	N	N	N	30	3,000
CH056	36 19 17	108 6 28	3.0	.3	1.5	1.0	700	N	N	N	30	5,000
CH057	36 19 1	108 6 34	3.0	.7	2.0	.7	1,000	N	N	N	50	5,000
CH058	36 18 59	108 4 46	5.0	.7	1.5	1.0	1,000	N	N	N	50	>5,000
CH059	36 18 50	108 4 47	3.0	1.0	2.0	1.0	1,500	N	N	N	20	5,000
CH060	36 19 45	108 4 13	5.0	.7	2.0	1.0	1,500	N	N	N	50	5,000
CH061	36 19 47	108 3 41	3.0	3.0	1.5	1.0	700	N	N	N	20	5,000
CH062	36 19 45	108 3 4	2.0	.7	1.0	1.0	1,000	N	N	N	70	5,000
CH065	36 20 51	108 3 53	1.5	.3	.7	.5	1,500	N	N	N	70	5,000
CH066	36 20 16	108 6 22	5.0	.5	2.0	1.0	1,500	N	N	N	50	>5,000
CH067	36 20 14	108 6 13	3.0	.3	2.0	1.0	1,500	N	N	N	30	5,000
CH069	36 9 17	107 56 44	3.0	.3	1.0	1.0	2,000	N	N	N	50	3,000
CH070	36 9 19	107 56 30	1.5	.2	1.5	.5	1,000	N	N	N	70	1,500
CH071	36 9 8	107 56 33	1.5	.3	3.0	.7	3,000	N	N	N	70	3,000

Table 6. Analytical data for <100-mesh sieved fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].--continued

Sample	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s
CH054	1.0	N	N	15	20	50	50	N	<20	15	50	N
CH056	1.0	N	N	15	20	30	100	N	<20	10	50	N
CH057	1.0	N	N	15	50	70	100	N	<20	20	70	N
CH058	1.0	N	N	15	50	100	100	N	20	15	70	N
CH059	1.0	N	N	15	50	70	70	N	<20	15	50	N
CH060	1.0	N	N	15	50	150	100	N	20	15	70	N
CH061	1.0	N	N	15	30	30	100	N	<20	15	30	N
CH062	1.5	N	N	10	50	70	200	N	20	15	70	N
CH065	1.0	N	N	7	100	20	100	N	<20	10	50	N
CH066	1.0	N	N	20	70	70	150	N	20	15	100	N
CH067	1.0	N	N	10	50	50	100	N	<20	15	70	N
CH069	1.0	N	N	10	100	50	70	N	20	10	50	N
CH070	1.0	N	N	10	50	15	70	N	<20	10	50	N
CH071	1.0	N	N	10	150	20	100	N	<20	15	70	N

Table 6. Analytical data for <100-mesh sieved fractions derived from stream-sediment samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].--continued

Sample	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	U-ppm i
CH054	5	N	1,000	100	N	20	N	200	N	.85
CH056	5	N	700	150	N	50	N	1,000	N	.80
CH057	7	N	1,000	150	N	30	N	200	N	.90
CH058	10	N	1,000	200	N	50	N	1,000	N	.90
CH059	10	N	1,000	150	N	30	N	300	N	.55
CH060	10	N	1,000	200	N	50	N	1,000	N	.80
CH061	5	N	1,000	150	N	70	N	>1,000	N	1.00
CH062	7	N	500	100	N	70	N	>1,000	N	1.00
CH065	<5	N	500	70	N	50	N	>1,000	N	.90
CH066	10	N	1,000	200	N	200	N	>1,000	N	1.40
CH067	7	N	700	150	N	300	N	>1,000	N	.95
CH069	5	N	500	150	N	70	N	>1,000	N	.70
CH070	5	N	500	70	N	30	N	500	N	.65
CH071	7	N	300	70	N	50	N	500	N	.70

Table 7. Analytical data for rock samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s
CH018R	36 18 38	108 1 30	.50	.50	1.50	.150	300	N	N	N	50	1,000
CH040R	36 19 48	108 1 33	15.00	.10	.70	.070	>5,000	N	N	N	20	3,000
CH045R	36 20 43	108 3 50	.07	<.02	<.05	.005	2,000	N	N	N	N	>5,000
CH049R	36 20 35	108 3 4	3.00	.30	5.00	.100	>5,000	N	N	N	20	>5,000
CH064R	36 21 31	108 3 17	20.00	.30	.50	.150	>5,000	N	N	N	15	1,500
CH068R	36 8 59	107 55 11	20.00	.30	3.00	.050	>5,000	N	N	N	<10	700
CH069R1	36 9 14	107 56 47	.50	.03	.20	.070	500	N	N	N	150	150
CH069R2	36 9 14	107 56 47	.30	.07	.30	.500	100	N	N	N	100	300

Table 7. Analytical data for rock samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s
CH018R	N	N	N	5	30	15	<20	N	N	5	50
CH040R	3	N	N	50	<10	15	50	N	N	50	50
CH045R	N	N	N	N	N	N	N	N	N	N	20
CH049R	3	N	N	<5	<10	20	<20	70	N	15	30
CH064R	2	N	N	15	<10	15	<20	N	N	10	10
CH068R	5	N	N	15	<10	10	<20	N	N	7	10
CH069R1	2	N	N	N	20	20	<20	N	N	5	20
CH069R2	3	N	N	N	30	70	<20	N	N	5	50

Table 7. Analytical data for rock samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s
CH018R	N	N	N	1,000	30	N	15	N	150	N
CH040R	N	5	N	500	70	N	50	<200	50	N
CH045R	N	N	N	5,000	10	N	10	N	10	N
CH049R	N	5	N	1,000	150	N	20	N	100	N
CH064R	N	5	N	700	100	N	30	N	30	N
CH068R	N	5	N	500	30	N	30	N	20	N
CH069R1	N	<5	N	N	50	N	15	N	50	N
CH069R2	N	7	N	N	100	N	20	N	70	N

Table 8. Analytical data for water samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	Latitude	Longitude	Ca-ppm	Cl-ppm	F-ppm	K-ppm	Li-ppm	Mg-ppm	Na-ppm	Sr-ppm	Alk-ppm
CH021W	36 15 45	108 7 51	6.7	2,600	4.2	19.0	.340	3.5	2,400	3.400	2,200
CH027W	36 11 6	107 55 12	130.0	4,500	.7	20.0	.290	29.0	3,000	3.400	400
CH042W	36 19 47	108 1 56	27.0	26	1.3	2.9	.110	7.0	140	.260	23
CH050W	36 14 55	108 12 56	6.3	66	1.4	4.3	.120	2.9	800	1.400	640
CH051W	36 13 31	108 9 13	2.7	43	5.0	2.5	.057	.9	550	.600	640
CH052W	36 16 31	108 3 42	33.0	25	3.1	2.7	.029	3.0	300	.620	550
CH055W	36 19 12	108 6 5	9.9	500	13.0	18.0	.630	7.2	4,600	1.900	2,000
CH063W	36 19 42	108 2 21	9.1	25	1.6	.7	.012	.2	100	.054	100

Table 8. Analytical data for water samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	NO3-ppm	SiO2-ppm	SO4-ppm	Charge-%	pH	Rn-pC/L	Sp Cond	Temp-C	Al-ppb	As-ppb
CH021W	--	22.0	.39	-2.1	7.0	--	9,800	22.5	<36	<1.0
CH027W	--	10.0	.10	2.2	7.4	--	16,000	19.0	<36	<1.0
CH042W	--	45.0	260.00	9.0	6.9	--	770	16.0	<36	<1.0
CH050W	11.0	8.4	1,300.00	-5.4	8.4	86	3,600	--	<150	5.0
CH051W	7.6	8.4	790.00	-8.1	8.8	51	2,400	17.0	<150	3.0
CH052W	43.0	10.0	430.00	-6.4	8.2	44	1,700	16.0	<150	1.3
CH055W	<10.0	13.0	9,000.00	-7.5	9.5	--	22,000	--	<150	6.8
CH063W	.5	50.0	100.00	3.9	9.5	--	480	--	1,290	21.0

Table 8. Analytical data for water samples, Bisti, De-Na-Zin and Ah-Shi-Sle-Pah Wilderness Study Areas, San Juan County, New Mexico [table explained in text].

Sample	Ba-ppb	B-ppb	Cu-ppb	Fe-ppb	Mn-ppb	Mo-ppb	Ti-ppb	U-ppb	Zn-ppb
CH021W	11,000	650	<5	20.0	<2	1.0	<7	<.10	<10
CH027W	3,200	380	<5	350.0	210	<1.0	<7	<.10	170
CH042W	7	34	<5	8.0	860	<1.0	<7	<.10	380
CH050W	31	170	<5	600.0	15	60.0	<7	<.10	<10
CH051W	26	210	<5	30.0	5	19.0	<7	.10	43
CH052W	52	93	<5	6.4	450	4.6	<7	11.00	55
CH055W	38	1,800	<5	100.0	<2	120.0	<7	18.00	62
CH063W	36	47	<5	650.0	5	5.5	47	.14	44